

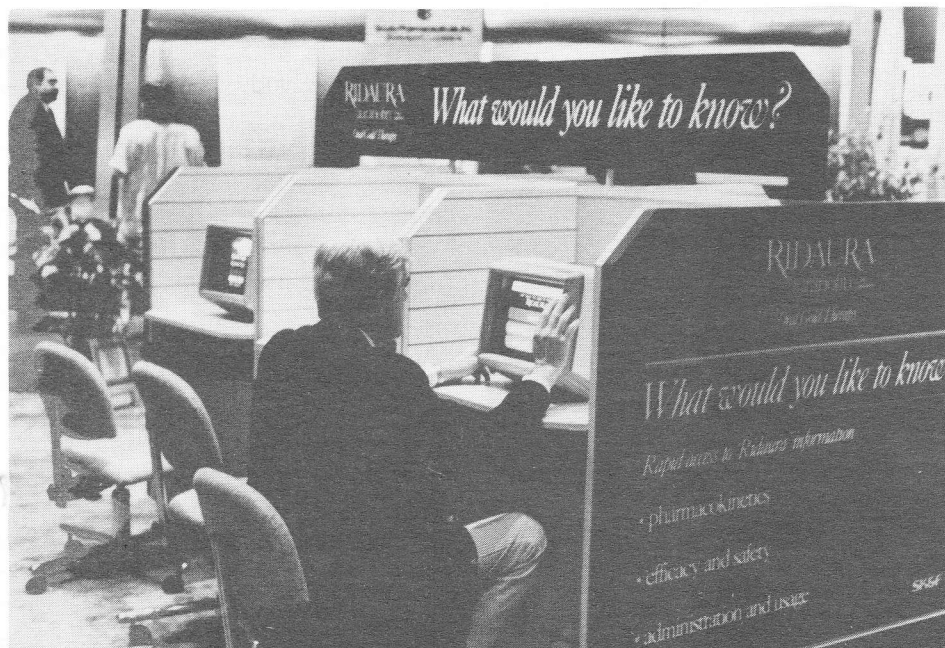
# Medical Disc

## R E P O R T E R

Vol. 1, No. 5

Covering Videodisc Applications in the Health Sciences

Sept./Oct. 1985



Smith, Kline & French Pharmaceutical's new interactive touchscreen exhibit.

### SK&F's Interactive Graphics Exhibit

Baker Videoactive of Philadelphia has recently completed "The Ridaura Information Center," an interactive touchscreen program for Smith, Kline and French Laboratories. The program, which premiered last June at the American Rheumatology Conference in Anaheim, was designed to introduce SK&F's new product "Ridaura." Physicians obtain a wide variety of product information by touching a series of distinctive color graphic screens.

"For this application," reports **Diane**

**Abramson** of Baker Videoactive, "the interactive graphics are an effective and inexpensive alternative to videodisc." The program was designed and produced for Digital Techniques, Inc.'s TOUCHCOM II interactive video system. Six TOUCHCOM units are used in the SK&F exhibit, which will be appearing at medical conferences nationwide during the next two years. *For additional information, contact Diane Abramson, Baker Videoactive, 1501 Walnut Street, Philadelphia, PA 19102, 215/988-0434.*

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### Intelligent Images, National Library of Medicine Share Nebraska Award

When the Nebraska Videodisc Awards are presented October 2, representatives from Intelligent Images, Inc. (III) and the National Library of Medicine (NLM) will be there to share the honor of receiving the award for the Best Educational Application. Intelligent Images, which first released its award-winning simulation *Victor Mercedes* in February 1984, is in the process of producing an entire series of videodisc-based patient simulations—at the incredible rate of two each month.

The NLM winner, *The Case of Frank Hall* premiered this spring at the ADCIS conference in Philadelphia and is the result of two years of careful work at the Lister Hill National Center for Biomedical Communications, the research and development arm of NLM.

III's *Victor Mercedes* presents a patient who is brought into the emergency room of DxTER Memorial Hospital with a shotgun wound to the abdomen. The learner must "treat" the patient by selecting from a number of diagnostic and therapeutic procedures. The patient gets better or worse, depending on the treatment decisions made by the learner. At the end of the simulation the learner may view a discussion of the case as well as review a cost-of-care analysis.

The NLM simulation, *Frank Hall*, involves a 46-year-old man who comes into the emergency room complaining of weakness and abdominal pain following an episode of vomiting blood two days earlier. The student manages the patient

(continued on page 6)

## Applications

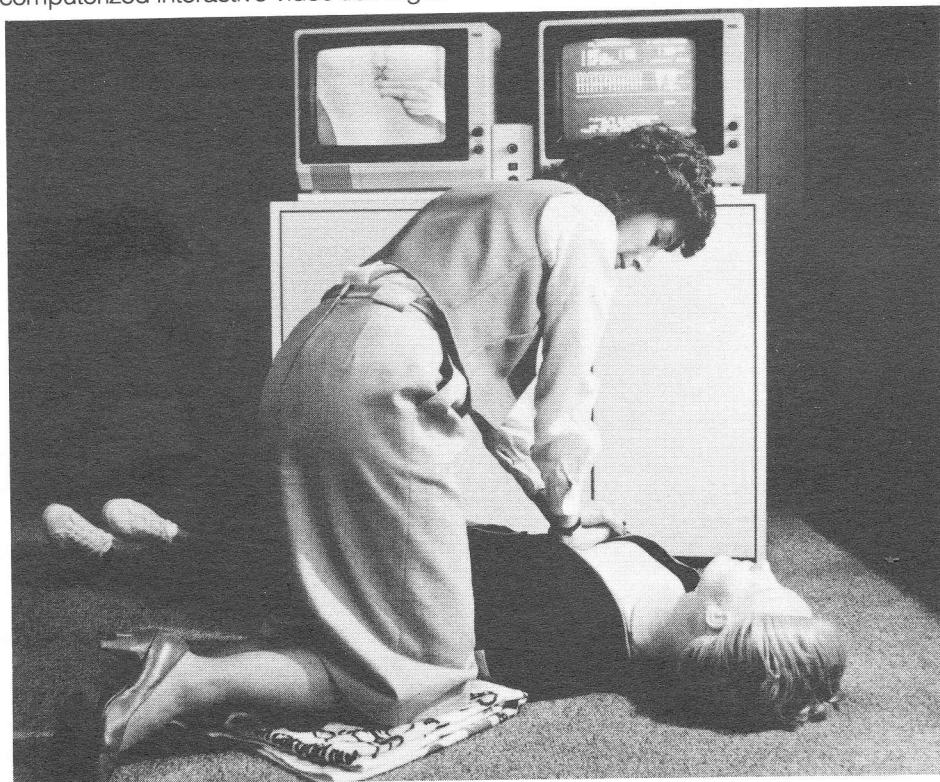
### Actronics Lands Marines

Over the July 4th weekend, Actronics, Inc. delivered six American Heart Association Learning Systems to the Marines at Parris Island. Later in August, six more Learning Systems were delivered to the San Diego USMC base. The 12 systems purchased by the Marines will deliver training in cardiopulmonary resuscitation (CPR) to over 1500 marines at the two base locations.

The Learning System, patented by the American Heart Association and exclusively licensed for manufacturing and marketing by Actronics, Inc., delivers computerized interactive video training in

CPR. The CPR program comes equipped with a computerized manikin which enables students to learn from the "victim." Sensors located in the manikin tell students the depth of their chest compressions, how well they are performing ventilations, and whether or not the "victim" has a pulse. Students may become certified in CPR on the Learning System in accordance with the American Heart Association standards.

*For further information, contact Lisa Cooper Jensen, Actronics, Inc., 810 River Avenue, Pittsburgh, PA, 412/231-6200.*



*Actronic's CPR Learning System with computerized manikin and videodisc player.*

### Lippincott Begins Physical Exam Series

The J.B. Lippincott Company, a major publisher of medical and nursing books, has selected Baker Videoactive of Philadelphia to produce a series of 12 Level III videodiscs for the health professions. The series, based on the highly successful textbook and film series, "A Guide to Physical Examination," by **Barbara Bates, M.D.**, will be designed for independent study and as an instructional aid.

The series will be produced by taking existing film sequences and adapting them to the videodisc format. According to **Diane Abramson** at Baker, the series will allow the user to learn all techniques essential for the physical examination of a patient by allowing the user to simulate an examination. He will see a real patient and hear sounds as they would normally be heard through the stethoscope.

**H. Michael Eisler**, Editor-in-Chief of the Media Development for Lippincott reports, "This will be the first interactive video series designed specifically to meet a major need in the formal education of health professionals. Unlike traditional methods of learning physical examination, this series provides comprehensive and consistent instruction for all students." The series, which will be available about a year from now, will be marketed by Lippincott for use with IBM and Apple computers. *For further information contact Diane Abramson, Baker Videoactive, 1501 Walnut Street, Philadelphia, PA 19102, 215/988-0434.*

### Nebraska's Nugent Reviews Industry Trends

**Ron Nugent**, Director of the Nebraska Videodisc Group, has spent the past few months visiting several of the leading videodisc producers across the country and questioning them on their methods and techniques. One purpose of the trips, sponsored by a grant from the Corporation for Public Broadcasting, was to gather information on the future of the videodisc industry.

The persons and organizations visited

were Perceptronics; Digital Equipment Corporation; **David Hon** of IXION; **Ken Christie**, formerly a designer for Disney's EPCOT Center and now an independent producer; **Joe Clark** of Videodiscovery; The University of Iowa, and The Army Communicative Technology Office at Fort Eustis, Virginia. The results of these interviews, along with additional information from videodisc hardware manufacturers and observations made at recent confer-

ences, will be released as a paper this fall.

A few comments on his findings are included in the August issue of the Nebraska Videodisc Group's newsletter, which is available free-of-charge. Anyone who is interested in being put on their mailing list may contact the *Videodisc Design/Production Group, KUON-TV/University of Nebraska-Lincoln, P.O. Box 83111, Lincoln, NE 68501-3111, 402/472-3611.*



## Nursing Decisions Videodisc Completed

Teaching the process of clinical problem-solving is one of the greatest challenges that nurse educators face. Its difficulty is surpassed only by the problem of evaluating how well a learner understands the complexity of the clinical situation. In traditional hospital settings, considerations of patient safety do not allow learners the option to exercise and implement their clinical judgements freely and to experience the full consequences of their decisions.

The County College of Morris has developed an interactive videodisc program that addresses this problem by creating a simulation which allows the learner to exercise options, implement decisions, and follow-up the results of those decisions free of the restraints imposed in most clinical teaching situations. By recording learner responses in computer memory, it also enables an instructor to review and evaluate the learner's performance in the simulation.

The videodisc depicts four postoperative situations and a client chart. Mrs. Morris, a postoperative cholecystectomy patient, presents symptoms common to many patients following abdominal surgery. Using the disc, the learner collects clinical data, analyzes the situation, makes decisions, and sees the results of those decisions depicted on the screen.

Following the branching paths of the options presented, the learner actively applies and builds on his or her clinical knowledge to achieve a satisfactory outcome for Mrs. Morris. The four situations include: 1) a postoperative assessment on the day of surgery, 2) a focused oxygen assessment on the first postoperative day, 3) an intravenous therapy assessment on the third postoperative day, and 4) a health status assessment on the fourth postoperative day.

The program was mastered and edited by County College of Morris on 3/4-inch videotape and plays on a Sony SMC-70 computer. It was funded jointly by a Computers in Curricula grant from the New Jersey Department of Higher Education and by the County College of Morris. *For further information, contact Gloria Lombardi, M.A., R.N., County College of Morris, Route 10 & Center Grove Road, Randolph, NJ 07869.*

## Nursing Interactive Workshop

For four-and-one-half days in August, eighteen nurse educators took part in an intensive, hands-on interactive video training institute. Sponsored by the Helene Fuld Health Trust for Nursing Education, the workshop took place at Hocking

Technical College in Nelsonville, Ohio. Participants came from nursing schools from all parts of the country, with the faculty including **David Burke** and **Dan Krivich** of Electronic Vision and **Mark Heyer** of Mark Heyer and Associates.

The workshop was designed to give the participants experience in producing an interactive video program. Although interactive videodisc was discussed, shown, and explained, the hands-on experience made use of interactive videotape and an authoring system so the participants could experience all aspects of the interactive video process.

Reaction from the participants was enthusiastic. All welcomed the opportunity to actually produce something and get the feel for interactive video. One participant said, "Though our production was not perfect, I felt the process of learning to use the equipment, etc. was more important! And so the sessions, though frustrating at times, were extremely valuable."

Because of the successful feedback and interest expressed in the workshop, additional Interactive Video Institutes are planned for the future. *For additional information contact David Burke, Electronic Vision, One President Street, Athens, OH 45701, 614/594-5842.*

## Interactive Video in Health Care Conference

The Second Annual Conference on Interactive Video in Nursing, Medicine, and Allied Health Sciences will be held April 23-25, 1986 in Galveston, Texas. The conference will feature three full days of programs including demonstration, paper, and plenary sessions on interactive videodisc and videotape in health care.

The \$175 registration fee will include admission to a half-day introductory pre-session on computers in healthcare, led by **Gary Hales, PhD**, Editor-in-Chief of *Computers in Nursing* and Assistant Professor in the School of Allied Health Science, The University of Texas Medical Branch at Galveston.

Exhibit space currently is available at \$750 for a standard size booth. Conference supporters who make a \$650 contribution will be provided with a booth and two paid admissions.

Last years conference, which was held in Sacramento, California attracted nearly 200 registrants, with this years attendance estimated to reach 400 participants. For more information regarding the conference, or to submit paper proposals, contact **Gary D. Hales, PhD**, *Second Interactive Video Conference, 11225 Forked Bough, Houston, TX 77042, 713/784-8326 or 409/761-3040.*

## MDR Subscription Special

The *MedicalDisc Reporter* is currently offering an "end of the year" special to new subscribers. Until December 15, you can order a two year subscription to the MDR and the 1985 *MedicalDisc Directory* for \$165 and receive the entire 1985 volume *free!*

That's a total of three years of the MDR, plus the MedicalDisc Directory, all for less than the cost of a one-year subscription to other industry newsletters.

There never will be a better time to join the health science's only videodisc "bulletin board." This offer is for a limited time only, so mail in your subscription today. See the back page for detailed information and an MDR order form.

## Military

# Navy Sold on Videodisc for Healthcare Training

The Naval Health Sciences Education Training Command (NHSETC) has initiated the development of a large-scale videodisc network to serve their educational and training needs. The Computer-Assisted Medical Interactive Video System, or CAMIS, will be used in Naval schools and hospitals for refresher training and continuing education.

### Medical/Dental Schools

The school program will be implemented in November, with 50 learning carrels being installed at schools that train hospital corpsmen and dental technicians. Along with the hardware system, the Navy will distribute two programs designed for refresher training. The first, *Basic Anatomy and Physiology*, is an eight-part series being developed by the University of Maryland University College from existing videotape.

The second program, *Emergency Medical Conditions*, is designed to provide training to hospital corpsmen on how to recognize, treat, and report basic medical conditions such as angina pectoris, insulin shock, or myocardial infarction. It is produced from the point of view of two Navy corpsmen, with each vignette beginning with a summons to the scene. The learner then is presented with a patient who is suffering from a medical condition that he must diagnose and treat.

The program is menu-driven, with learner choices including rapid assessment, head-to-toe examination, and a series of questions which they can ask the patient. Once the learner has completed a vignette, the program provides feedback by presenting an ideal case management. If the learner did not perform up to a pre-determined standard, he is required to take a corollary vignette as remediation. Those learners who do very poorly are routed to an instructor.

The 50 hardware systems that have been purchased by the Navy are IBM PC-based and are being supplied by On-line Systems, Inc. in Germantown, Maryland. In 1986 the Navy plans to purchase an additional 70 carrels, for a total of 120. The additional purchase will be open to procurement, with the specification that

they be compatible with those currently being installed.

### Hospital Implementation

The Navy also plans to place an additional 90 videodisc units in their hospitals over a three year period. These units will be used for inservice education and combat readiness training. The NHSETC is currently in the final scripting phase of a combat casualty program to train non-surgeon physicians in the diagnosis and treatment of injuries commonly suffered in battle. The program is being produced under the Department of Defense banner and will have application to all ground force combat situations.

The program begins with a welcome aboard package as though the learner was actually reporting to a M.A.S.H. duty station. The orientation includes a description of the learning system itself, as if it were in the field. The learner is then placed in the role of having to manage a patient awaiting surgery. The program is designed so that the videotaped "patient" actually represents seven different patients, depending on which symptoms and sequences the computer selects.

The learner progresses through each of the seven cases, with the first being a relatively simple-to-manage pneumothorax resulting from a small missile wound. By

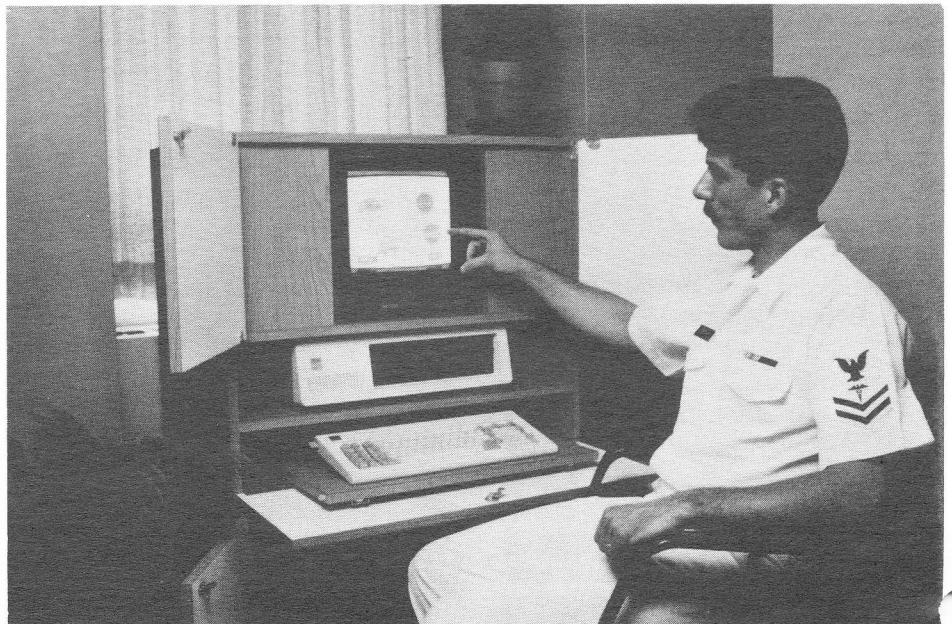
the time the learner works his way to the seventh case, the patient has a number of complications and is more difficult to diagnose and treat.

The emergency medicine program is being designed in-house with The University Services University of the Health Sciences (USUHS). Scripting assistance is being provided by MetaMedia in Germantown, Maryland. Production will take place in November, and will be done through the Defense Audiovisual Agency.

### Outside Software Purchases

By 1988 the Navy will have a total of 210 videodisc systems placed in its schools and hospitals. When asked about the Navy's interest in purchasing off-the-shelf software for these systems, **Phil Strub**, Deputy Director of the Medical Educational Media Management Office, replied, "I would say our interest in existing material would be fairly high because of the high cost of development. If there's something we can run that has applicability, either videodisc or CAI, we'd be interested in taking a look at it."

For additional information on the CAMIS project, contact Phil Strub at the Medical Educational Media Management Office, NHSETC, Naval Medical Center, Bethesda, MD 20814, 301/295-5593.



CAMIS System the Navy will place in 230 schools and hospitals.



## Pharmaceutical

## Roerig/Pfizer Laboratories

This article is the second in an ongoing series of reports on pharmaceutical companies developing promotional videodisc programs.

## Roerig

Roerig, a division of Pfizer Laboratories, developed their first videodisc, *Borderline Personality Disorders*, in time to be shown at the 1979 American Psychiatric Convention in New Orleans, Louisiana. The program was produced by a division of the advertising agency BBD&O in what was surely one of the fastest videodisc projects of its time.

According to **John Pace**, then General Manager of the Health Education Technologies division at BBD&O, the disc was "sold, scripted, shot, post-produced, mastered, and shown in a six-week period." In order to get that kind of turnaround in those days, Mr. Pace resorted to camping out on the doorstep of DiscoVision in Costa Mesa, California for a week. He reports it was worth the effort, however, as the exhibit played for three days to sold out audiences and received rave reviews from the convention participants.

## Urodynamics in Clinical Practice

Since then Roerig has sponsored two other videodisc programs. The first,

*Urodynamics in Clinical Practice*, introduces urologists to the theory and practice of urodynamics and was produced by the Glyn Group (258 West Fourth Street, New York, NY 10014). Intended to be shown at conventions, symposia, and hospitals, this Level II disc plays on a Pioneer-7820 videodisc player and is approved for continuing medical education (CME) credit.

In it the learner is presented a patient that is "worked up" from a menu that represents traditional urological methods. After a diagnosis and treatment are selected, the basic principles of urodynamics are reviewed, and the outcome of the treatment is revealed. The learner may then treat the patient using the procedures just learned.

## Percutaneous Stone Removal

*Nephrostolithotomy: The Percutaneous Route* explores the removal of stones with



Pfizer disc distributed in Germany.

laser surgery, and is approved for CME credit. It was developed by **Robert I. Kahn, MD**, Assistant Professor of Urology at the University of California San Francisco School of Medicine. The program explains the removal of renal and ureteral calculi by percutaneous nephrostomy—a laser surgical technique. Topics include Patient Selection, Localizing the Collecting System, Percutaneous Entry, Placement of Nephrostomy Tube, Anesthetizing Nephrostomy Tract, Tract Dilation, Stone Removal, Instrumentation, and Postoperative Care.

In addition to these projects, material from the Pfizer film *Bronchitis and Bronchiectasis-Differentiation for Therapy* was the basis for a videodisc produced by the American Medical Association called *Diagnosis and Management of a Pulmonary Problem*. The AMA disc was programed for two levels of audience—one level to help patients understand their condition, and second level to train physicians in the use of bronchoscopy to diagnose and treat pulmonary disease.

The Roerig videodiscs may be viewed by appointment only with a Roerig representative. Those interested may contact Karen Dawes, Product Manager, Roerig, Division of Pfizer Pharmaceuticals, Inc., 235 East 42nd Street, New York, NY 10017.

## United Kingdom

## Nutritional Videodisc Developed in U.K.

The August 15 issue of *Videodisc and Optical Disc Update* (11 Ferry Lane West, Westport, CT 06880, 203/226-6967) reported the development of an interactive videodisc program for the public titled *Eat Right Eat Well*.

The program, developed for the Food Division of the British Co-operative Whole Society, is placed in Co-op Superstores throughout Great Britain and tests the customer's knowledge of health and diet. The quiz takes about four minutes to complete, after which the computer prints out a personal one-day menu based on

the responses. The system generates questions regarding the viewer's sex, age, weight, activity level, and eating pattern, and can come up with over 15,000 possible menu combinations.

The system is housed in a free-standing kiosk which contains a Philips LV VP 831 videodisc player, BBC microcomputer, "Cheyne Scribbler" touchscreen, and an Epson 40-column printer. The program and display cabinet were designed by Convergent Communications, Ltd. in London.

For further information, contact Con-

vergent Communications, Ltd., 26 Eccleston Square, Victoria, London, SW1V 1NS. Telephone, 01/828-5855.

\* \* \*

**Ms. Signe Hoffos**, London Correspondent for the *Videodisc Monitor*, has left her position as Information Officer for EPIC and now is pursuing a career as an independent consultant. EPIC produced the patient simulation *Mary Wetherton* for Smith, Kline & French Pharmaceuticals. Ms. Hoffos may be reached at 27 Dean Road, London NW2 5AB.

## Applications

### MIT Developing Neuroanatomy

For the beginning student, neuroanatomy is difficult to learn because of the complex three-dimensional structure of the brain and the large amount of terminology that must be mastered. In an attempt to meet this teaching challenge, the Massachusetts Institute of Technology is creating a videodisc which will allow students to freely explore thousands of images of brain structure.

Most of the images that make up the instruction will be computer-generated three-dimensional views of the brain that allow the student to see any of a number of major brain structures and pathways, singly or in combination. These images will be supplemented by video images of original slides and video sequences from a human brain dissection.

The programmed instruction will lead students through each of the neural pathways relevant to a particular function, presenting a graphic display of the region, then asking questions and providing feedback to answers. "It is our

belief," says **Steven Wertheim** of MIT, "that this self-directed exploration, containing a strong visual component, will rather quickly give the beginning student of neuroanatomy a rich mental picture of brain structure—currently very difficult to come by."

To create the three-dimensional model, human brain sections are being digitized and the digital data is being edited with the CARTOS graphics package written at the Department of Biological Sciences, Columbia University. The major part of the user interface will be written with Digital's VAX/PRODUCER package. Any external programs necessary to augment PRODUCER will be written in the "C" language.

The project began in September 1984 and will be completed by September 1986. Demonstration of the graphic images will occur during this fall, with a pilot system expected to be available for student use in the spring of 1986.

For further information on the project, contact **Steven L. Wertheim**, Department of Psychology, E25-618, MIT, Cambridge, MA 02139, 617/253-5771.

### Cardiology Teaching Conference

The American College of Cardiology and the Lister Hill National Center for Biomedical Communication of the National Library of Medicine will co-sponsor a conference this October titled "Cardiovascular Teaching Techniques—Planning and Presenting Effective Instruction: Alternative Technologies of Teaching in Cardiovascular Medicine."

The primary goal of the program is to provide attendees with an overview of newer technologies available for teaching at the graduate and undergraduate levels. One hundred participants have been invited to attend the conference, which will be held at the Heart House Learning Center in Bethesda, Maryland. Attendees were identified by the directors of cardiology at selected medical schools as the key individuals responsible for graduate and undergraduate teaching within their respective institutions.

Although attendance at the conference is by invitation only, the Learning Center plans to publish the proceedings and make it available to all cardiovascular training directors.

### Sandoz Sponsors Alzheimer's Disc

The August issue of *Video Computing* (P.O. Box 3415, Indialantic, FL 32903, 305/768-2778) reports the development of an interactive videodisc by Sandoz Pharmaceuticals titled *Optimal Care of the Alzheimer's Patient*. The disc will be used primarily in trade show settings and is divided into five chapters.

The first chapter, "Common Clinical Problems," pairs problem areas with possible solutions and then quizzes the viewer at the conclusion of the presentation. Chapter Two, "Alzheimer's Disease: Background, Theories & Trends," makes frequent use of computer-generated graphics in presenting an overview of the condition.

"The Neglected Care-Giver" shows professionals at work in support group meetings with actual victims, while in chapter four, "Evaluation and Treatment," the learner is given the opportunity to diagnose and make treatment deci-

sions regarding a videotaped patient. The final chapter, "Optimal Care," provides the viewer with concluding remarks.

The program was designed and produced by Videograf in New York, and plays on an Apple computer with an Allen Communications interface and a Pioneer V-4000 videodisc player.

For further information, contact **Michael Frenchman**, Associate Producer, Videograf, 144 West 27th Street, New York, NY 10021, 212/242-7871.

### Interactive Video Study

A comparison of noninteractive and interactive video instruction about smokeless tobacco was conducted at the University of Houston, the results of which will be published soon. After viewing linear or interactive version of a videotape, experimental and control groups completed a questionnaire to ascertain knowledge and attitudes about smokeless tobacco and lesson satisfaction.

The interactive video group demonstrated the most accurate and comprehensive recall. Additionally, the interactive video group was more willing to promote cessation among users. Learner satisfaction with the interactive video equipment and lesson was high.

For additional information, contact **Dr. Phyllis Levenson**, Department of HPER, College of Education, University of Houston, Houston, TX 77004, 713/749-4386 or 713/721-4134.

### Nebraska Award

(continued from page 1)

using a microphone and a command vocabulary of about 55 medical terms. The system provides feedback by immediately portraying the impact of the learner's decisions as well as reviewing their management decisions.

For more information on the *Intelligent Images* project, contact **Dr. David Allan**, Executive Vice President, 5677 Oberlin Drive, Suite 114, San Diego, CA 92121, 619/457-5505.

For further information on the NLM disc, contact **Dr. William Harless**, LHNBCB, 8600 Rockville Pike, Bethesda MD 20892, 301/496-4441.



## Publications Scanner

Issue 10 of *Library Hi Tech* includes three articles on laserdisc technology. "A Regional Bibliographic Database on Videodisc" describes the creation and advantages of a union catalog containing 600,000 unique titles and 1.8 million physical items. "CD-ROM and Libraries" explains and illustrates current and potential applications of the Compact Disc-Read Only Memory format, and "Laserdisc Systems from Reference Technology" describes the CLASIX Line of 12-inch laserdisc technology developed by Reference Technology, Inc. (Pierian Press, Box 1808, Ann Arbor, MI 48106, 313/434-6409.)

\* \* \*

"Systems for Authoring Computer-Based Instruction" provides an overview of authoring-system technology and a set of procedures for documenting system capabilities and determining whether systems are relevant to local needs. The 47-page publication is the result of extensive reviews by **Craig Locatis** and **Victor Carr** of the Lister Hill National center for Biomedical Communications at the National Library of Medicine. It is intended as a guide for educators and trainers who are considering acquiring systems for authoring computer-based instruction. The report is available from the Government Printing Office for \$10. When ordering, reference PB 85 98 950 A04. A limited number of copies are available free from the authors. *For further information contact Craig Locatis, Teaching and Consultation Branch, LHNCCB, National Library of Medicine, 8600 Rockville Pike, Bethesda, MD 20894, 301/496-6280.*

\* \* \*

The August issue of *AV Video* offers "The Interactive Video Standoff: Tape vs. Disc" in which **Mark Magel** reviews the advantages and disadvantages of each format. (Montage Publishing, Inc., 25550 Hawthorne Blvd., Suite 314, Torrance, CA 90505, 213/373-9993.

## Calendar of Events

### OCTOBER

**Nebraska Videodisc Symposium**, Lincoln, NE, September 30-October 3. Contact the Nebraska Videodisc Design/Production Group, 402/472-3611.

**Optical Memory Technology Conference**, Tokyo, Japan, October 2-4. Contact Technology Opportunity conferences, 415/626-1133.

**International Electronic Imaging Expo and Conference 85**, Boston, MA, October 8-10. Contact Institute for Graphic Communication, 617/267-9425.

**Meeting on Optical Data Storage**, Washington, D.C., October 15-17. Contact Optical Society of America, 202/223-0920.

**Computers in Healthcare 85**, San Francisco, CA, October 23-26. Contact California Data Mart, 415/864-3921.

**Optical Disc Read Only Memory Forum**, Arlington, VA, October 23-25. Contact SALT, 703/347-0055.

### NOVEMBER

**Ninth Annual Symposium on Computer Applications in Medical Care (SCAMC)**, Baltimore, MD, November 10-13. Contact SCAMC, 202/676-8928.

**Videodisc Design Production Workshop**, Lincoln, NE, November 10-14. Contact Nebraska Videodisc Design/Production Group, 402/472-3611.

**Future of Optical Memories, Videodisc, and Compact Discs to the Year 2000**, San Francisco, CA, November 12-14. Contact Technology Opportunity Conferences, 415/626-1133.

**UK Interactive Technology Briefing**, London, England, November 25-28. Contact EPIC Industrial Communications, 28 Litchfield Street, London WC2H 9NJ, 01/240-9051.

### DECEMBER

**Videodisc, Optical Disk and CD-ROM Conference**, Philadelphia, PA, December 9-12. Contact Meckler Publishing 203/226-6967.

**Video Expo**, Orlando, FL, December 10-12. Contact Knowledge Industry Publications, 800/248-5474 or 914/328-9157.

**Optical Memory Symposium**, Tokyo, Japan, December 11-13. Contact OITDA Japan, 03/508-2091.

### FEBRUARY

**Conference on Interactive Instruction Delivery**, Orlando, FL, February 19-21. Contact SALT 703/347-0055.

### APRIL

**Second Annual Conference on Interactive Video in Nursing, Medicine, and Allied Health Sciences**, Galveston, TX, April 23-25. Contact Gary Hales 713/784-8326.

## Salt to Hold Health Care Conference

The Society for Applied Learning Technology (SALT) recently sent questionnaires to members of its Health Care Sciences Special Interest Group regarding the desirability of holding a conference on "Learning Technology in the Health Care Science." Ray Fox, President of SALT, reports that the response was such that the conference has been scheduled and will be held in Arlington, Virginia on April 2-4, 1986.

Technologies of interest to respondents were Interactive Videodisc, Direct Read After Write (DRAW), Patient Simulations, Networking, Robotics,

Satellite Telecommunication, Expert Systems/Artificial Intelligence, and CD-ROM. Other areas identified as needing attention include competency assessment, educating in the workplace, applications in continuing medical education, emergency health services, rehabilitation medicine, and patient education (including potential risk factors and informed consent), legal risk management, and skill maintenance.

*For additional information, contact Ray Fox, SALT, 50 Culpeper Street, Warrenton, VA 22186.*

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Scott Stewart

**Graphics Editor**  
J.C. Clark

# Don't Miss the Excitement!

No more waiting—it's here! Videodisc technology now is being used in the health sciences as an efficient and cost-effective way to store and retrieve information, train health professionals, and promote products and ideas. Consider that:

- Over 100 videodisc programs have *already been completed* in continuing education, nursing, and allied health education. That number will double in 1986.

- A one-sided videodisc can store 55,000 medical images. "Jukebox" systems are being developed that will handle two million patient records.

- POINDEX, DRUGDEX, EMERINDEX AND IDENTIDEX are just a few of the medical data bases now available on compact disc (CD-ROM).

- More than a dozen pharmaceutical companies already are using videodisc productions as marketing tools at medical conventions and symposia—with resounding success.

## Sit Back and Relax!

While all this is going on, you won't miss a thing. The *MedicalDisc Reporter* will keep you informed of the latest developments in a concise, easy-

to-read style of writing. No more wading through volumes of material just to find the information you want. If it's happening in the health sciences, the MDR is reporting it. And each article lists a contact person so you can find out more about any subject.

## Buy Two, Get One Free!

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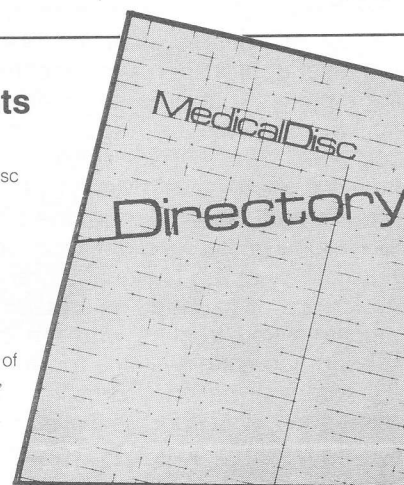
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